



Chronic CAD/Stable Ischemic Heart Disease

INCIDENCE OF DEPRESSION, CHRONIC FATIGUE AND SEXUAL DYSFUNCTION WITH BETA-BLOCKER USE: A META-ANALYSIS OF RANDOMIZED CONTROL TRIALS

ACC Moderated Poster Contributions
McCormick Place South, Hall A
Monday, March 26, 2012, 9:30 a.m.-10:30 a.m.

Session Title: Nuances and New Insights
Abstract Category: 3. Chronic CAD/Stable Ischemic Heart Disease: Therapy
Presentation Number: 1210-542

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Background: Reluctance to using beta blockers may derive from concerns about their association with depression, sexual dysfunction and chronic fatigue.

Methods: We used MEDLINE, Cochrane and EMBASE (through June 2011) to conduct a comprehensive search for randomized clinical trials of beta blocker use in patients with heart disease reporting incidence of depression, sexual dysfunction and chronic fatigue. Only good and fair quality trials were included based on CONSORT guidelines. We excluded trials with cross over design and who enrolled less than 100 subjects.

Results: We included 42,756 patients from 26 clinical trials. Compared to placebo, patients receiving beta blockers had a small significant increased risk of chronic fatigue or asthenia (pooled odds ratio: 1.18; 95% confidence interval: 1.01-1.38) during an average (weighted mean) follow up of 36 months. Overall, no association between incident depression or sexual dysfunction with beta blocker use was noted. However, on limiting the analysis to beta blockers with intrinsic sympathomimetic activity, a significantly decreased risk of depression was noted (see table). There was significant heterogeneity observed across these studies but results remained similar on excluding the studies which accounted for heterogeneity. No publication bias was noted by egger's test and funnel plot.

Conclusion: Beta blocker therapy is not associated with a substantial increase in the incidence of depression, chronic fatigue, and sexual dysfunction.

Table denoting pooled odds (95% confidence interval) of experiencing the outcome in the beta blocker arm compared to a placebo arm.

	Depression	Sexual Dysfunction	Chronic fatigue
All Trials	1.04 (0.76 – 1.41)	1.15 (0.93 – 1.40)	1.18 (1.01 – 1.38)
Lipophilic beta-blocker only	1.02 (0.70 – 1.49)	1.13 (0.86 – 1.49)	1.19 (0.98 – 1.45)
Lipophobic beta-blocker only	1.08 (0.58 – 2.03)	1.17 (0.89 – 1.52)	1.16 (0.94 – 1.43)
Non selective beta-blocker only	0.84 (0.47 – 1.48)	0.73 (0.36 – 1.48)	1.13 (0.82 – 1.56)
Beta-1 selective beta blocker only	1.22 (0.80 – 1.87)	1.20 (0.97 – 1.47)	1.19 (0.99 – 1.43)
Beta-blockers with intrinsic sympathomimetic activity only	0.77 (0.55 – 0.90)	0.78 (0.52 – 1.16)	0.91 (0.65 – 1.26)